

Grape 2 Drive HDD Swap Procedure

3/2025 N8OBJ

1 - In a terminal window on the Grape2 system type:

preswap

This will:

- Transfer today's files to xfer directory
- Compress files for xfer
- Xfer files to repo
- Unmount the G2DATA drive correctly (via the OS)
- Fix fstab file and remove system mount of G2DATA (no more OS panic on boot!)
- Delete the /home/pi/G2DATA/nd marker file
- Remove the directory /home/pi/G2DATA
- Create a symbolic link from /media/pi/G2DATA to the new /home/pi/G2DATA
- Mount G2DATA drive into its new configuration at location /home/pi/G2DATA

2 - Insert the supplied flash drive into the upper blue USB port of the Raspberry Pi. BE CAREFUL not to move the HDD USB (just below it) cable up or down - it will disconnect the drive (and unmount it!). If you did this by accident, simply unplug then replug the HDD USB cable (you should see a window pop up for the file manager for the G2DATA drive). Also verify that the G2DATA drive is mounted properly by typing:

- **cd ~**
- **ll**
- The G2DATA link should appear in blue letters. If it's red the link did not work and needs to be fixed (mounted). If it's red, try un-mounting the drive then try un-plugging, waiting 3 seconds and re-plugging the USB cable for the G2DATA drive. If this still fails consult HAMSCI for help.

3 - Save the critical data onto the flash drive by typing:

- **cd /media/pi/G2COPY**
- then execute the script: **./g2copy.sh**
- NOTE: This script takes about 7 hours 20 minutes to execute - be patient and don't mess with system while it's doing this.
- We are saving 10 days of critical data on the flash drive for backup before shipping the drive back. It starts out quick then slows to a crawl when the cache fills up...
- You should see all the files being verified as they are copied in blocks (by day). There should be 10 blocks of 'identical' files listed if you scroll back. If there are any error they should be corrected. Consult HAMSCI if there are any issues.

4 – Now unmount both drives:

- **cd ~** (this gets you back to /home/pi/ directory)
- **sudo umount /dev/sda1**
- **sudo umount /dev/sdb1**

5 – Remove (unplug) both drives from the system

6 – Power down the HDD (unplug wall wart power supply) and then remove the HDD from its enclosure. Peel the tape back holding the lid closed and slide the drive out. Be careful with the connector.

7 – Install the new HDD into the enclosure and tape it back together. Slide the new drive in and be sure to align the connector. Please be gentle with the HDD connector – it can be broken.

8 – Inside the antistatic bag is a small blue sticker – remove the backing strips and apply it to the removed drive in the same location as the drive you just installed. Place the drive and the USB flash drive into the antistatic bag for shipping back to the University of Alabama (with supplied pre-paid shipping label)

9 – Turn on the HDD (plug in wall wart power supply) and then plug the USB cable into the lower blue USB connector on the RasPi4

10 – in the terminal window run:

PSWSsetup

This will create all the new directories on the G2DATA drive and correctly apply the system permissions to the drive.

11 – Now log out of the session and log back in as user: **pi** pswd: **pi**

12 – The G2Console should pop up again and start taking data.

13 – Repack the HDD (with the Flash USB drive in the bag with it). Tape it up in the box (just 1 piece of tape along the bottom front edge to keep the flap closed), apply the shipping label and ship the drive back to the U of A.

14 – Congrats – you’re done!